

Texas Agricultural Extension Service

People Helping People

GROWING CHRISTMAS TREES IN TEXAS

James W. Chandler*

When considering growing a specific crop, such as Christmas trees, a landowner should first look at the market potential. Texas has an excellent potential market because of population. In 1982, the estimated population was 15.3 million and the approximate number of households was 4.7 million. For this reason, northern and western Christmas tree growers ship truckloads of trees into the state each year. Texas growers have captured a portion of this market by supplying well-formed, fresh trees at a competitive price. Texas Christmas tree production can be profitable but requires time and long-term, financial investment for intensive cultural management practices to produce high-quality Christmas trees.

This fact sheet explains Christmas tree production for the prospective grower. For additional information contact your county Extension agent. A more detailed, for-sale-only publication is available from the Extension forestry specialist.

Tree Variety

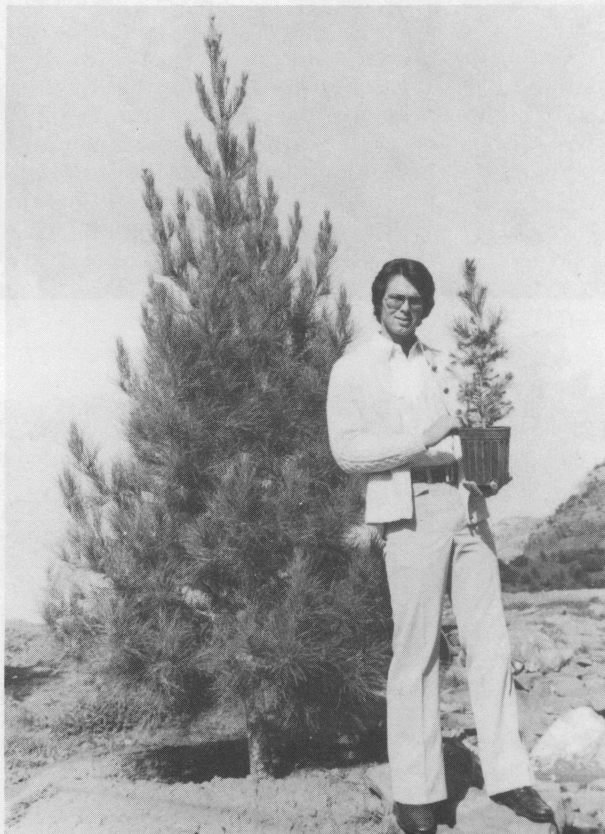
Virginia pine (*Pinus virginia*) is the major Christmas tree species for the acidic soils found in East Texas. A grower can produce a 6- to 8-foot Virginia pine Christmas tree in 3 to 5 years, depending on soil and climatic conditions. Two sources of seedlings are the Texas Christmas Tree Growers Association and the Texas Forest Service.

Afghan pine (*Pinus eldarica*) is the major Christmas tree species for the alkaline soils found in South Central and West Texas. Growth rate of this pine variety is very similar to Virginia pine. Planting stock for Afghan pine is available from several commercial sources. The South Texas Chapter of the Texas Christmas Tree Growers Association organizes a bulk order for seedlings each winter.

Other tree species planted in limited amounts are eastern redcedar (*Juniperus virginia*), deodar cedar

(*Cedrus deodara*), Arizona cypress (*Cypressus arizonica*), sand pine (*Pinus clausa*) and spruce pine (*Pinus glabra*). These are usually restricted to choose-and-cut operations which provide variety for the customer.

Once the tree species is selected, it is essential to obtain the best planting stock. If genetically improved planting stock is available, give it top priority. Next to genetics, consider planting stock quality because quality stock produces quality Christmas trees. An 8- to 12-inch seedling is a preferable size.



Afghan pines are grown in South Central and West Texas.

*Extension forester, The Texas A&M University System

Preplant Procedures

Many problems may be avoided by carefully choosing and preparing the planting site. Establish the Christmas tree plantation on the best site possible. Do not put it on land that would not be used for anything else. Major factors to avoid are poor drainage, inaccessibility and shading from mature timber stands.

Both Virginia and Afghan pine attain best growth on well-drained, deep topsoils of loam, sandy loam or clay loam texture. Virginia pine does best on acid soils with a pH ranging from 5.5 to 6.5. Afghan pine is adapted to an alkaline pH ranging from 7.0 to 8.5. Avoid deep, coarse sands and heavy clay soils for either species. Steep slopes are also a risk because they contribute to soil erosion and can be hazardous when operating mechanized equipment.

Site preparation is beneficial to early tree growth and development. In the past the general practice was to burn the area and plant seedlings. Now disking, subsoiling and leveling are recommended.

Exercise care when disturbing soils on sloping sites because of potential erosion problems.

Controlling the pocket gopher before planting is essential. The most practical and efficient method is the use of toxic baits. Handle bait material very carefully. Once seedlings are established make control measures an annual management exercise.

Planting

Quality planting stock deserves quality care during planting. Never allow root systems to dry out. Whether planting by hand or with machine, observe proper planting techniques. J-rooting of seedlings, where the main root curves back toward the soil surface, can lead to stunted growth and/or mortality. Never try to pace yourself according to the daily output of experienced tree planting crews. When this is done, quality is sacrificed for quantity.

Spacing depends on the size of equipment to be used in the plantation. The number of trees per acre at various spacings is shown on the following page.



Photo at top shows first-year Christmas trees under cultivation as a weed control technique. Second-year trees with herbicides and mowing used as weed control technique are shown in bottom photo.

Spacing in feet	Number of trees per acre
6 by 6	1,210
6 by 8	908
7 by 7	889
8 by 8	681

Management Procedures

Christmas tree production is not a week-end business. It is not a venture for absentee landowners unless someone is available to work the plantation on a routine basis. During the growing season, daily attention is required.

A good example of regular work is insect pest control. An intensive insecticide spray program is an integral part of plantation work. Insects are more susceptible to control measures at specific times during their life cycles. To get the optimum benefit of spraying with minimum insect damage to the trees, monitor the life cycle. Many growers use pheromone or sex-lure traps to monitor peak insect activity. When peak activity occurs, growers must spray.

The major insect pest of the Virginia and Afghan pines is the Nantucket pine tip moth (*Rhyacionia frustrana*). This insect damages the tips of terminal and lateral branches during the growing season.

Soil moisture is critical the first year that seedlings are in the ground. In East Texas, Christmas tree plantations generally receive adequate rainfall for

first-year seedlings if weed competition is controlled around trees. In South Central and West Texas, trickle irrigation systems are used on Afghan pine plantations.

Always control competing vegetation. Weeds compete with trees for available soil moisture and shade lower branches, causing sparse foliage in the lower portion of marketable trees. To control weeds, use herbicides in the immediate vicinity of the trees, but use them very carefully according to label directions. Mow row middles, avoiding damage to lower tree branches. Cultivation is another weed control tool which can be used but avoid root damage.

To produce quality trees, it is essential to begin shaping Virginia and Afghan pines in the second year of production. Most shaping is done by hand with pruning shears and a special Christmas tree shearing knife. Trees are sheared in late April and again in mid-July. In Southeast and South Central Texas, additional shearings are needed because of the trees' rapid growth. Lateral branches are sheared and the terminal shoot is pruned. A well-shaped tree is about two-thirds as wide as it is tall.

Marketing

Most Christmas trees are marketed when they are at least 6 feet in height. Growers may consider marketing choose-n-cut at the farm, wholesale or through retail lots of their own.

If the Christmas tree farm is located in an area with a large number of households, a good choose-n-cut operation can be established. Depending on the distance from neighboring urban areas, choose-n-cut farms sell trees ranging from \$2.50 to \$5 per foot of height.

By selling trees on a wholesale basis, a grower sells a bulk amount of trees at a lower price per tree, but it



Lateral branch shearing with a sharp knife is a key part of tree shaping.



Prune the terminal leader to control height and maintain proper tree shape.



Virginia pines ready for harvest. Notice how the alley has narrowed.



There is a demand for large Christmas trees at choose-n-cut farms.

does not require dealing directly with the public. Wholesale only high-quality trees and concentrate on building future clientele.

Retail lots are not usually successful in towns under 10,000 in population. Factors to consider in managing a retail lot include competent sales people, location, licensing, insurance, vandalism, theft and above all, care of the tree to keep the product from drying out.

In Texas, a 4-year period is generally required to produce a marketable tree. It is estimated that approximately \$2,500 per acre is invested before the first tree is sold. This type of an investment requires serious planning. The larger the operation, the more the producer must depend on salaried employees to assist with intensive management. Consider this when determining the acreage to establish.

Educational programs conducted by the Texas Agricultural Extension Service serve people of all ages regardless of socioeconomic level, race, color, sex, religion, handicap or national origin.

Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Zerle L. Carpenter, Director, Texas Agricultural Extension Service, The Texas A&M University System.

5M-6-85, Revision

FOR